358. Proposed by H. C. FEEMSTER, A. B., Professor of Mathematics, York College, York, Neb.

Cut four coplanar non-copunctual straight lines in a harmonic range.

CALCULUS.

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387. Proposed by C. N. SCHMALL, 604 East 5th Street, New York City.

An object P, being placed beyond the principal focus F of a convex lense, determine its position when its distance PQ, from its image Q, is a minimum.

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388. Proposed by L. H. McDONALD, M. A., Ph. D., Sometimes Tutor at Cambridge, Jersey City, N. J.

$$\text{Find } \int \frac{x\,dx}{(1+x^3)^{\frac{2}{3}}}.$$

MECHANICS.

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240. Proposed by G. B. M. ZERR, A. M., Ph. D., Philadelphia, Pa.

A simple beam length $2a$, supported at both ends, is loaded in the form of a parabola, height of vertex b. Find deflection at center due to this load.

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241. Proposed by C. N. SCHMALL, 604 East 5th Street, New York City.

In a certain New York theatre there is an asbestos curtain supported by thin circular rings, radius r, which move on a cylindrical rod of radius a. The curtain is intended to be drawn by a *steady pull.* Taking μ as the coefficient of friction, show that this will not be possible if r be less than $a\sqrt{(1+\mu^2)}$.

NUMBER THEORY AND DIOPHANTINE ANALYSIS.

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170. Proposed by PATRICK WALSH, 1451 Annunciation Street, New Orleans, La.

The areas of rectangles A and B are respectively 15170 10/27 and 31230.3627. Find the sides and diagonal of each rectangle in exact or rational numbers.

NOTES AND NEWS.

The editors extend to all our readers the Greetings of the Coming Year. We hope that delays in the regular appearance of THE MONTHLT will not occur during 1910. We trust that our subscribers will continue their support and that we may have the immediate renewals of those who have not already remitted their subscriptions for the new year.

On December 23, Editor Miller was married to Miss Cassie A. Boggs. They will make their home in Urbana, Illinois. The other editors and all readers of the monthly extend congratulations to the happy couple.

Dr. G. E. Fisher, of the University of Pennsylvania, has been appointed Dean of the College of Arts and Sciences, and Dr. I. J. Schwatt, of the same University, has been promoted to full professorship of mathematics. F.

The article in this number on "The Teaching of Analytic Geometry" is the first of a series of papers on the teaching of collegiate mathematics to be published in the Monthly. The editors assume no responsibility for the propositions set forth in these papers, but they welcome the expression of views on this subject as an indication of life and a recognition of room for improvement. They feel sure that many interesting and valuable contributions can be made along this line by those whose experience in various particular phases of the work enables them to speak with some authority, and it is hoped that the papers already arranged for may call forth others, to the end that the various points of view may be fully and clearly set forth.

Renewals and the securing of new subscriptions for 1910 are now in order. In this connection, we wish to thank Professor M. E. Graber, of Heidelberg University, Tiffin, Ohio, for the interest he is taking in presenting the claims of the MONTHLY to the Teachers of Mathematics in Ohio. He did good work for the MONTHLY at the meeting of Science and Mathematics Teachers which met at Columbus, Ohio, December 29th. One such enthusiastic supporter in every State in the Union would soon put the MONTHLY on a self-sustaining basis. F.

The second meeting of the Science and Mathematics Section of the Ohio College Association was held on Wednesday morning, December 29th, in Chemistry Hall, Ohio State University, where the following papers were read:

1. The Nature and Value of a Lecture Course on the Modern Concepts of Mathematics open to Juniors and Seniors. Prof. Henry D. Coar, Marietta College.

2. The Nature of a First Course in Analytic Geometry. Prof. Grace M. Bareis, Ohio State University.

3. What should be the Range of Work in Chemistry for a Liberal Education? Prof. William B. Bentley, Ohio University.

4. What is the Cultural Value of Geology in a College Course? Prof. Lewis W. Westgate, Ohio Wesleyan University.

The officers for the year 1910 are, president, Prof. H. D. Coar; vice president, Prof. W. B. Bentley; and secretary, Prof. M. E. Graber. SEC.

☞Title page of Vols. XV and XVI were put in May number.